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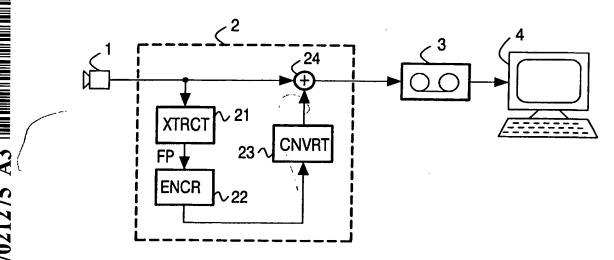
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(54) Title: EMBEDDING FINGERPRINT DATA FOR MEDIA CONTENT IDENTIFICATION



(57) Abstract: Disclosed is a method of embedding a fingerprint identifying media content into a media transmission signal used for transmission of said media content. In order to achieve that the embedded fingerprint survives all kinds of analogue and digital processing such as compression, the fingerprint (FP) extracted (21) from the content is converted (23) into the same signal format as used for the transmission of the content. For example, the fingerprint derived from a video signal generated by a security camera (1) is converted into image pixels. The fingerprint is subsequently accommodated (24) in a part of the signal being provided, but not being used, for transmission of content. For example, the fingerprint of video images is accommodated in the vertical blanking interval of a television signal. The converted fingerprint may also replace a small part of the original content.



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A. CLASSIFICATION OF SUBJECT MATTER IPC 7 G06T1/00

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According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols) $\begin{tabular}{ll} IPC & 7 & G06T & H04N \end{tabular}$

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, INSPEC, PAJ, IBM-TDB

Category °		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	
Category	Citation of document, with indication, where appropriate, of the	e relevant passages	Relevant to claim No.
X	WO 00 51348 A (MACROVISION COR 31 August 2000 (2000-08-31) abstract page 2, line 21 -page 3, line page 5, line 15 - line 36		1-16
X	EP 0 618 723 A (SONY CORP) 5 October 1994 (1994-10-05) page 4		1,4-8, 13-16
X	EP 0 901 282 A (HITACHI LTD) 10 March 1999 (1999-03-10) figures 1,2		1,7
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X Furt	her documents are listed in the continuation of box C.	Patent family members are listed	l in annex.
	her documents are listed in the continuation of box C. ategories of cited documents:		
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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT			
ategory °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.	
A	OOSTVEEN J ET AL: "VISUAL HASHING OF DIGITAL VIDEO: APPLICATIONS AND TECHNIQUES" PROCEEDINGS OF THE SPIE, SPIE, BELLINGHAM, VA, US, vol. 4472, December 2001 (2001-12), pages 121-131, XP001078972 ISSN: 0277-786X cited in the application abstract	1-16	
A	WO 99 18723 A (HOLZGRAFE JAMES R ;DIGIMARC CORP (US); RYAN JOHN O (US); CAPITANT) 15 April 1999 (1999-04-15) abstract page 11 -page 13	1-16	
A	SCHNEIDER M ET AL: "A robust content based digital signature for image authentication" PROCEEDINGS OF THE INTERNATIONAL CONFERENCE ON IMAGE PROCESSING (ICIP) LAUSANNE, SEPT. 16 - 19, 1996, NEW YORK, IEEE, US, vol. 1, 16 September 1996 (1996-09-16), pages 227-230, XP010202372 ISBN: 0-7803-3259-8 section 5.0	1-16	

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- (71) Applicant (for all designated States except US): KONIN-KLIJKE PHILIPS ELECTRONICS N.V. [NL/NL]: Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): ROBERTS, David, K. [GB/GB]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).
- (74) Agent: SCHMITZ, Herman, J., R.; Philips Intellectual Property & Standards, Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).

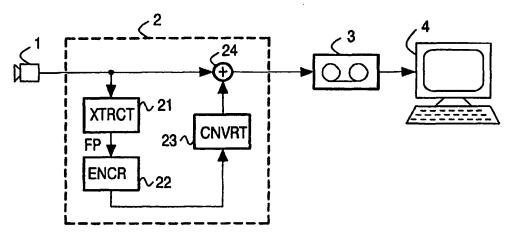
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- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL. PT. RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO

[Continued on next page]

(54) Title: EMBEDDING FINGERPRINT DATA FOR MEDIA CONTENT IDENTIFICATION



(57) Abstract: Disclosed is a method of embedding a fingerprint identifying media content into a media transmission signal used for transmission of said media content. In order to achieve that the embedded fingerprint survives all kinds of analogue and digital processing such as compression, the fingerprint (FP) extracted (21) from the content is converted (23) into the same signal format as used for the transmission of the content. For example, the fingerprint derived from a video signal generated by a security camera (1) is converted into image pixels. The fingerprint is subsequently accommodated (24) in a part of the signal being provided, but not being used, for transmission of content. For example, the fingerprint of video images is accommodated in the vertical blanking interval of a television signal. The converted fingerprint may also replace a small part of the original content.





patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

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